

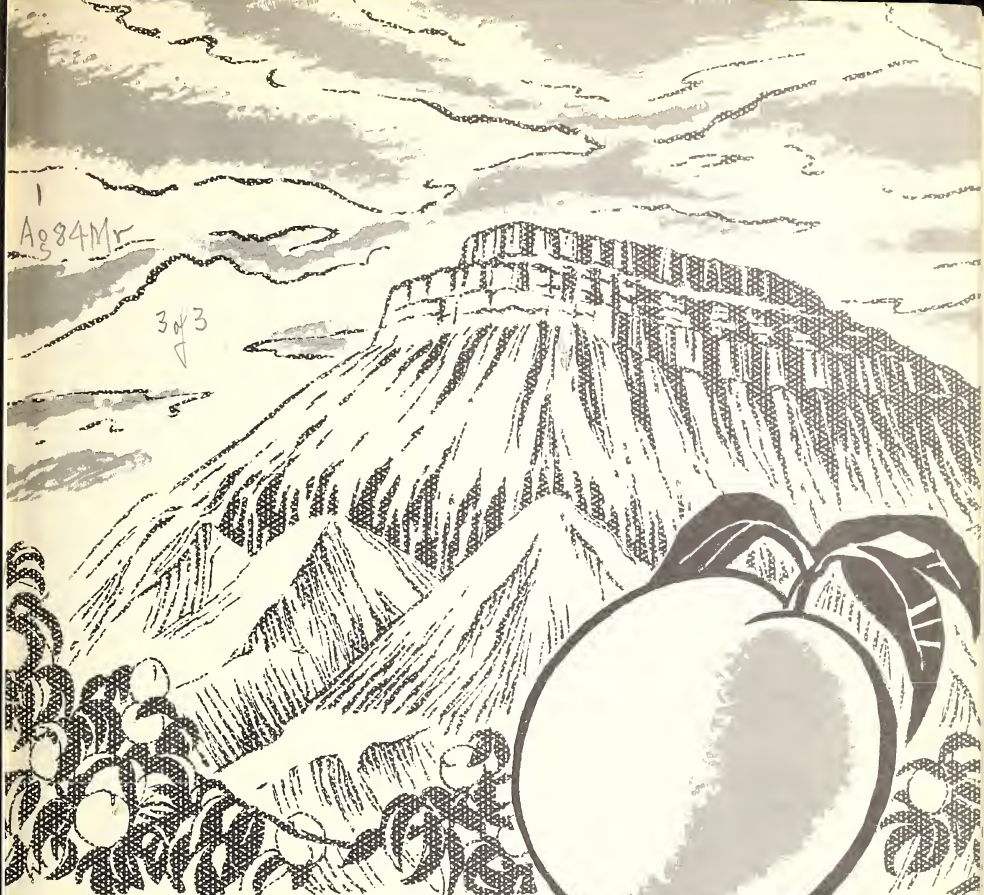
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Costs of Packing
COLORADO PEACHES
in 1956

Marketing Research Report No. 179

U. S. DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service • Marketing Research Division

PREFACE

During 1945-54, the average annual production of peaches in the United States was almost 67 million bushels. Of these, slightly over 21 million bushels were clingstone peaches produced in California, mainly for canning. Approximately 46 million bushels were freestone peaches produced largely for the fresh market. The Standard Elberta variety accounts for from 50 to 70 percent of the total United States production of freestone peaches and comprises as high as 85 percent of the total production of some peach producing areas.

The predominance of one variety that must be picked and marketed in a relatively short period intensifies the difficulty of picking and packing operations and shipping the fruit to market. Because peaches are extremely perishable, the peach industry is faced with a number of marketing problems.

In order to increase the consumption of fresh peaches, growers know they must market a more mature peach in a relatively bruise-free condition. They have taken an active interest in research relating to the harvesting, packing, and marketing of peaches. Considerable research is being done on types of packages and methods of transporting peaches in order to deliver them to market at the optimum stage of maturity with the minimum of bruising.

In 1953, a preliminary study of the costs of marketing South Carolina peaches in New York City was initiated by the Agricultural Marketing Service. This was followed in 1954 with a study of the costs of marketing peaches in both North and South Carolina.

This study of the costs of packing Colorado peaches was undertaken at the invitation of the Mesa County Peach Board of Control in conjunction with the Colorado State Department of Agriculture. It was carried out so as to give results comparable with the studies previously undertaken.

ACKNOWLEDGMENTS

The author is indebted to the Mesa County peach growers and packers who permitted the observation of packing operations in their sheds and made available the information on costs of overhead and materials which are a major component of this analysis. The assistance of Professor C. Richard Creek of Colorado A & M College in planning the survey and performing the fieldwork is also gratefully acknowledged. Mr. Oscar Jaynes, Secretary of the Mesa County Peach Board of Control, is due recognition for implementing the study and supplying much of the background material in this report.

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July 1957

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COSTS OF PACKING COLORADO PEACHES IN 1956

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SUMMARY

1. The 1945-54 average annual production of peaches in Colorado was 1,762,000 bushels. In 1954 and 1955 over 2 million bushels were produced. The 1956 crops were reduced by spring frosts to approximately 1.5 million bushels. Most of the peaches are produced in Mesa County. In 1956, slightly over 1 million bushels were shipped from this area alone. This was approximately two-thirds of the capacity of the area.
2. The data contained in this report are based on observations made in 7 central packing sheds, all of which were packing peaches in the standard fruit box, and 18 ranch packing sheds, 12 of which used the fruit box and 6 the bushel tub basket.
3. In the central sheds, the total time required to receive fruit, pack it, and load it onto trucks or freight cars for shipment to market was 5.9 man-minutes per packed box. The same operations in the ranch sheds required 7.5 man-minutes per box and 12.4 man-minutes per packed bushel basket.
4. Total time required to pack 100 pounds of peaches into bushel baskets averaged 25.9 man-minutes. Central sheds required 32.6 man-minutes to pack 100 pounds of peaches into boxes while ranch sheds averaged 41.9 man-minutes.
5. Labor costs per packed box averaged 12.2 cents in central sheds and 15.5 cents in ranch sheds. Labor costs per packed bushel basket averaged 24.4 cents.
6. Labor costs to pack 100 pounds of peaches in bushel baskets are much less than for the standard fruit box. Ranch sheds packing the bushel tub basket had average labor costs of approximately 50.8 cents per 100 pounds of peaches while central sheds and ranch sheds that packed the standard fruit box had average costs of 68.1 cents and 85.9 cents per 100 pounds, respectively.
7. Overhead and materials costs per packed box averaged 32.4 cents in central sheds and 41.0 cents in ranch sheds. These costs averaged 74.4 cents per packed bushel basket.
8. Overhead in ranch sheds that packed the standard fruit box averaged 55.3 cents per 100 pounds of peaches, compared with 35.6 cents in the central sheds, which also packed boxes, and 38.4 cents per 100 pounds of peaches packed in baskets.

9. Total packing costs averaged 44.6 cents per packed box in central sheds and 56.4 cents in ranch sheds. Total costs per packed bushel tub basket averaged 98.8 cents. Converted to costs-per-100 pounds of peaches packed, these costs averaged \$2.48 in central sheds and \$3.13 in ranch sheds packing the standard fruit box. Total costs per 100 pounds of peaches packed in bushel baskets averaged \$2.06.

10. Mesa County peaches are marketed under both Federal and State marketing agreements. In 1956, only U. S. No. 1 peaches, 2 1/4 inches or larger, could be shipped out of the area, with the exception of Gleason and early Elberta peaches for which the minimum size was 2 inches. The posted price for size 40, 50, 60, and 70 peaches was \$1.25 per box; for size 75 peaches it was \$1.15 per box. Basket peaches 2 1/8 to 2 1/4 inches were priced at \$2.50 per bushel while peaches 2 1/4 inches and larger sold for \$2.75 per bushel. Posted prices for bulk peaches ranged from \$1.00 to \$2.25 per bushel but most were sold for \$2.00.

11. Assuming that the posted prices were the actual gross prices received by growers who packed their own fruit, it is estimated that their returns for production averaged 38 cents per box and \$1.23 per bushel basket. Out of these returns they had to pay the costs of growing the fruit and a living wage for their families.

12. It is indicated that costs could be reduced in the short run by some consolidation of the packing process. In order to reduce costs in the long run and at the same time meet the market demand for a more mature peach, some consideration will need to be given to modernization and expansion of central packing facilities, including the precooling of the peaches before shipment to market.

INTRODUCTION

Colorado is one of the leading States in the production of peaches for fresh market. The bulk of these peaches is produced on irrigated land in a relatively restricted area of Mesa County, stretching 25 miles from the mouth of the De Beque Canyon on the east to the Monument area on the west. The center of the peach marketing activity is the town of Palisade, located at the eastern end of the area. In 1956, the Mesa County Peach Board of Control estimated that there were approximately 750 commercial peach producers who had about 770,000 peach trees on 6,500 acres of land, averaging slightly less than 9 acres of peaches per ranch.

The 1945-54 average annual production of peaches for the State of Colorado was 1,762,000 bushels. Both 1954 and 1955 were years of large crops, totaling over 2 million bushels. Due to spring frosts, the total 1956 crop was less than 1.5 million bushels with possibly only 1.2 million bushels meeting the grade requirements for shipment to the fresh market. Mesa County marketed slightly over 1 million bushels of peaches, approximately two-thirds of the normal capacity of the area.

Approximately 85 percent of the peaches grown in Mesa County is of the Standard Elberta variety. The packing season for these usually lasts from 10 days to 2 weeks, beginning after the middle of August. In 1956, however, because of the shortness of the crop and favorable growing conditions during the last of July and the first of August, the bulk of the peach crop was packed with a 7-day period--August 19 to 26--with peak shipments being reached on August 22.

The portion of the crop that is sent to the fresh market--usually 80 to 90 percent of the total production--is packed in 7 central sheds and a large but undetermined number of ranch sheds. Four of the central sheds are operated by two cooperatives while the others are operated by two independent packers and shippers. In addition to packing facilities, the central sheds also maintain selling organizations during the peach harvesting season and their plants include facilities to load out both rail cars and trailers. As a result, almost all of the fruit shipped out of the valley is sold through and physically handled by the central sheds.

In 1956, approximately 60 percent of the Mesa County peaches was packed in the standard fruit box. The inside dimensions of this box are 11 1/2 " X 16 1/8 " X 4 1/2 " to 5 1/2 ", and in Colorado, was labeled to contain a minimum net weight of 16 pounds of peaches. However, the boxes shipped out during the 1956 season had an average net weight of 18 pounds of peaches and a gross weight of slightly over 20 pounds.

Approximately 34 percent of the 1956 peaches marketed from Mesa County was shipped in the standard bushel tub basket. The net weight of peaches in these containers averaged 48 pounds, while the gross shipping weight averaged slightly less than 53 pounds. The remainder of the crop was sold in bulk to itinerant truckers or packed in other types of packages.

During the period of observation covered by this study, all of the central sheds were packing in the standard fruit box, while ranch sheds were using either the standard box or the bushel tub basket.

PROCEDURE

During the week of August 19-26, 1956, detailed observations of the labor operations were made in 7 central sheds and a stratified sample of ranch packing sheds. A total of 18 records was obtained in the ranch packing sheds, 12 of which were packing the standard fruit box and 6 the bushel tub basket. The central sheds were located in Grand Junction, Clifton, Palisade, and East Orchard Mesa. All of the ranch sheds were located in the Palisade and East Orchard Mesa Districts.

In order to determine labor costs, the time required for performing each of the various packing shed operations from receiving the bulk fruit to loading out the packed containers was measured. In each case the time requirement was based on the total man-minutes put in that day by the workers engaged in the operations under observation. Unit time requirements were obtained by

dividing total man-minutes by the number of packed containers produced during the day. Labor costs were obtained by multiplying the unit time requirements for the various packing shed operations by the wage rate paid for each job.

Overhead and materials costs were obtained through personal interview with packing shed owners and managers at the close of the packing season. For the central sheds, the overhead and materials costs were taken from the accounting records of the firm. Most of the ranch sheds did not maintain detailed records, so most of the values for plant and equipment were the owners' estimates of the market or replacement value, while the charges for electricity, telephone, and other variable costs were also estimates based on previous experience.

PACKING SHED LABOR

Although the packing sheds observed varied greatly in size, the flow of the fruit through the packing process was basically the same and the job categories were comparable between the ranch and central packing sheds (fig. 1). Fruit was usually brought in from the orchard in picking lugs and was received at one end of the building near the beginning of the packing line. In some of the ranch sheds the fruit was stacked near the dumper as it was received from the orchard, but in the larger sheds it was necessary to hand truck the lugs of fruit from temporary storage on the shed floor to the dumper.

In all of the sheds observed during the course of this study, the dumping operation was performed manually, one man taking care of each packing line. Automatic dumpers were not used by any of the sheds included in this study. The job consisted of obtaining a lug of peaches from the nearby stack and emptying it onto a belt leading to the grading and sizing machine. The main requirement of this job is physical strength and stamina, although some care must be taken in emptying so as to minimize bruising and a certain pace must be maintained so that the graders have an even supply of peaches. After dumping the fruit, the empty lugs were stacked nearby or placed on a conveyor which carried them to stacks outside or elsewhere in the building.

The peaches were conveyed to a series of rollers where much of the leaves, twigs, and other extraneous matter was removed (fig. 2). Usually one or two persons stationed along the roller tables removed the debris and also pick out some of the ripe and defective fruit. In some plants, all of the graders were stationed along this grading table. In other plants, the peaches passed through a series of brushes before further grading.

After grading and brushing, the peaches passed on to a sizing machine (fig. 3). In those plants that were packing the standard fruit box, the peaches were separated into sizes 40, 50, 60, 70, and 75, which is the approximate number of peaches that can be packed in the box. Peaches to be packed into bushel baskets were separated into 2 sizes, 2 1/8 to 2 1/4 inches and 2 1/4 inches and up. The sizing machine deposited the peaches onto belts which conveyed them to the packing bins or tubs according to the proper size.

Peaches which were packed into the standard fruit box were individually wrapped in waxed paper (fig. 4). This operation was usually performed by

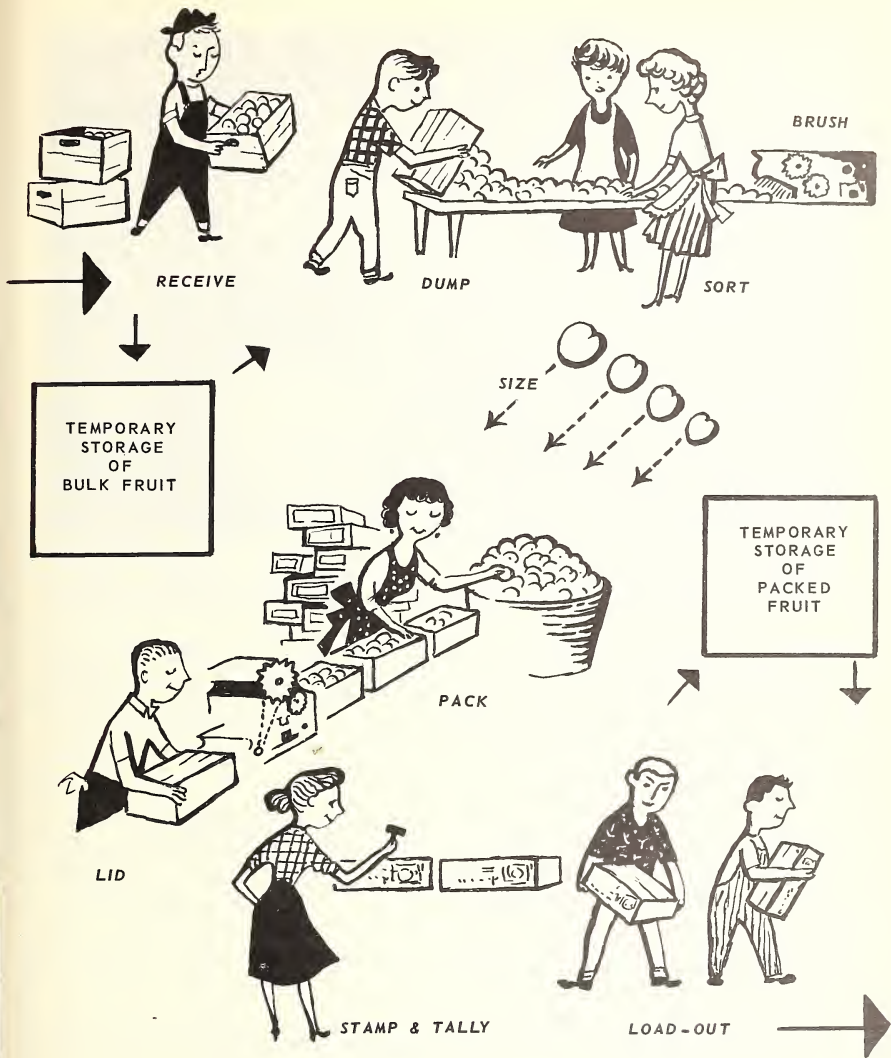


Figure 1.--Movement of fruit through the packing shed in packing peaches for fresh market, Colorado, 1956.



Figure 2.--Hand dumping peaches from field lugs onto the sorting table. Also shown are sorters who remove debris, culls, and overripe fruit.

young girls who became quite dexterous in picking up the peach, wrapping it, and placing it into the box according to the prescribed pattern for the size being packed. Peaches packed into bushel baskets were not wrapped, but the top layer of the basket was "faced" in order to present a pleasing appearance when the lid was removed. The remainder of the basket was jumble-packed by permitting the peaches to flow from the bin into the liner until the desired level was obtained.

From the packing stations the packed containers were conveyed to the lidded and stamper. Most sheds employed lidding machines to close the boxes. These machines varied in the degree of automation but were essentially the same in that they could be operated by one man who placed the lid in the machine or on the box and then pressed a pedal to nail the lid to the box. Lidding the baskets was largely a hand operation, usually employing a simple hand machine to invert the basket, placing the lid on the basket, and fastening wire hooks on the sides.

After the lidding operation, the containers of fruit passed on to the stamper who labeled each box or basket as to the variety, size, and grade of peaches it contained (fig. 5). In the central sheds, there was usually a tally clerk who kept an accurate check of the number of containers packed out of each grower's lot of peaches.

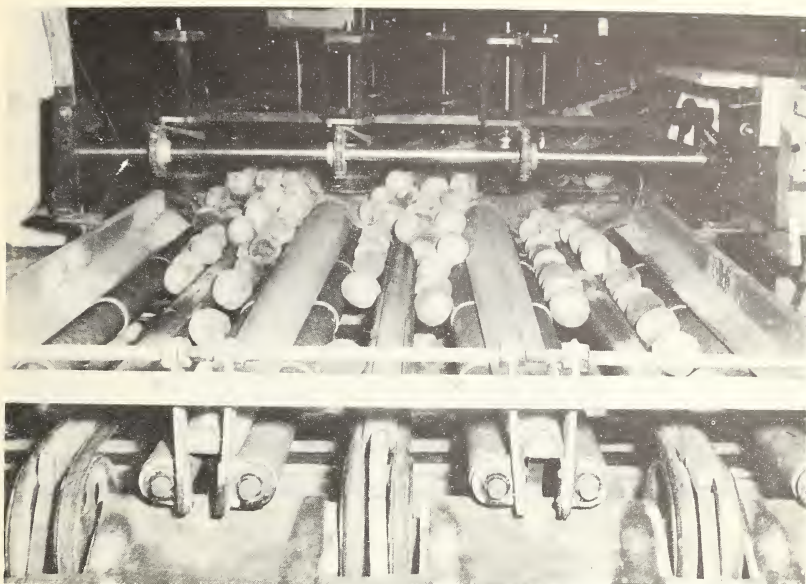


Figure 3.--One of the more modern sizing machines used in the area. Rollers gradually diverge, allowing peaches of the same diameter to drop to a series of conveyor belts which carry them to the packing tubs.

After the packed containers were stamped, they were stacked and transported to the loading out platform. In the small ranch sheds the containers could be loaded directly from the lilder, and in some cases the person performing the lidding operation also stacked the fruit and helped load it onto trucks. In the larger sheds, the packed containers were usually hand-trucked to temporary storage and later trucked to freight cars or trailers. Temporary storage in this sense is simply a waiting stage. Practically all of the Colorado peaches are shipped out the same day they are packed.

In addition to the workers performing the operations mentioned above, most sheds had extra labor that was classified as general. General labor included such operations as janitorial services, trucking culls, and making minor repairs on machinery and equipment. Supervisory labor in all sheds was responsible for the smooth operation of the entire packing shed. In the central sheds supervisory labor consisted of the plant manager, who was in charge of the entire operation, and packing crew supervisor who was in charge of all the packing labor. In the ranch sheds, these functions were usually performed by the owner and his wife.



Figure 4.--Individually wrapping peaches and packing them into the standard fruit box. Packed boxes are placed on conveyor belts in foreground.

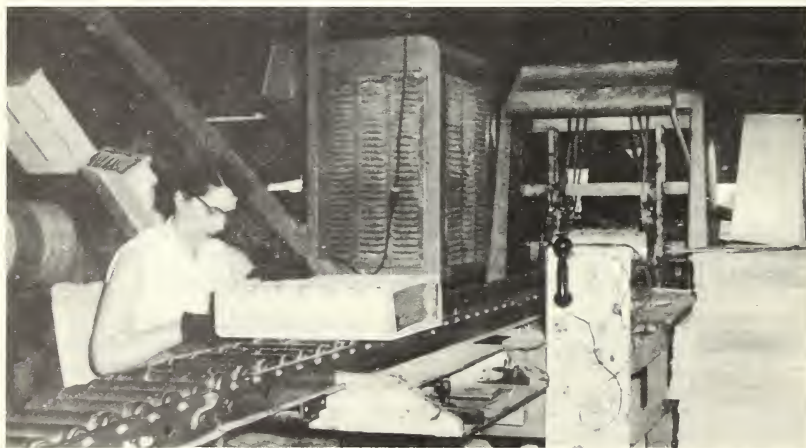


Figure 5.--Stamping the box according to grade and size of peaches it contains. Box has just passed through semi-automatic lidding machine in background.

Time Requirements Per Container

The total time required to perform the operations from receiving the bulk fruit to loading out the packed containers averaged 5.9 man-minutes per box in the 7 central sheds and 7.5 man-minutes per box in 12 ranch sheds. The total labor required to pack a bushel basket of peaches averaged 12.4 man-minutes in 6 ranch sheds. Average labor requirements per operation are shown in table 1 (appendix tables 9 to 11).

Table 1.--Average labor requirements per packed container of peaches, Mesa County, Colo., 1956

Operation	Box		Basket
	Central sheds	Ranch sheds	Ranch sheds
	Man-minutes	Man-minutes	Man-minutes
Dump	0.33	0.49	0.71
Grade	.67	.56	1.23
Supply materials	.28	.53	--
Pack	2.19	2.53	3.90
Gate control	.30	.30	--
Lid, label, and stamp	.42	.46	1.02
Receive	.31	.72	.94
Stack containers	.28	.37	.50
Load and haul	.61	.64	2.07
General	.30	.48	1.03
Supervisory	.18	.46	1.04
Total labor	5.87	7.54	12.44

Central sheds required less time to pack a box of peaches than did the ranch sheds (fig. 6). This was true in each of the labor categories except grading, where central sheds averaged 0.67 man-minutes per box compared with 0.56 man-minutes per box. Ranch sheds observed in the study usually employed 3 or 4 people at the grading table whereas the central sheds usually had 5 or 6 performing this essential job. It was observed that on the average the central sheds produced a higher quality pack than the ranch sheds. Some buyers specified that, when possible, their orders be filled with fruit packed in the central sheds. It is possible that some of the ranch sheds were not doing as good a job of grading as they should have been.

The savings in time that central sheds realized on the other packing jobs were largely due to the increased pace of the entire operation and some economies related to the larger volume of fruit handled. During the 1956 season, there were times when the volume of fruit coming into the ranch packing sheds was not sufficient to keep all of the employees working at optimum pace. Although the central sheds also were confronted with this problem, their operations were more flexible. If sufficient fruit was not available, one packing line was closed down so that the other could be

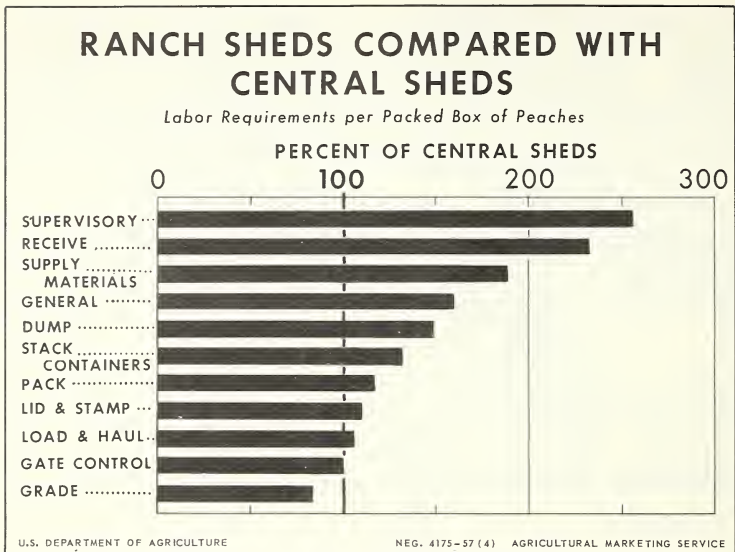


Figure 6

operated at optimum capacity. Likewise, if one plant had too much fruit, the surplus was often diverted to another plant that did not have as much fruit as it could handle.

Time Requirements Per 100 Pounds of Fruit

The labor requirements and costs to pack a container of fruit are not strictly comparable between sheds that packed boxes and those which packed the bushel tub basket. Peaches packed into the standard fruit box are individually wrapped while those packed in baskets are not. Although the facing of the bushel basket requires some time and skill, it is not as time-consuming as wrapping the individual peaches. Differences in containers and handling methods also tend to make comparisons of the two packing techniques misleading. However, since the standard fruit box contains an average net weight of approximately 18 pounds of peaches while the bushel tub basket averages approximately 48 pounds, $\frac{1}{3}$ the comparison of times required to pack each unit also may be misleading. The basket contains approximately 2.67 times as much

$\frac{1}{3}$ The weights used in these conversions are taken from unpublished data being used in a revision of "Containers in Common Use for Fresh Fruits and Vegetables." Farmers Bulletin 2013. U. S. Dept. Agr.

fruit as the box. To allow for this difference in container size, the average time requirements to pack 100 pounds of fruit were calculated (table 2, fig. 7).

Table 2.--Average labor requirements per 100 pounds of packed peaches, Colo., 1956

Operation	Boxes		Baskets
	Central sheds	Ranch sheds	Ranch sheds
	Man-minutes	Man-minutes	Man-minutes
Dump	1.83	2.72	1.48
Grade	3.72	3.11	2.56
Supply materials	1.56	2.94	--
Pack	12.17	14.06	8.12
Gate control	1.67	1.67	--
Lid, label, and stamp	2.33	2.56	2.12
Receive	1.72	4.00	1.96
Stack containers	1.56	2.06	1.04
Load and haul	3.39	3.56	4.31
General	1.67	2.67	2.15
Supervisory	1.00	2.56	2.17
Total labor	32.62	41.91	25.91

When all sheds are put on the basis of labor requirements per 100 pounds of fruit, the data indicate that increased output can be obtained by packing peaches in baskets. Time savings occur in the actual packing process which was 8.1 man-minutes compared with 12.2 and 14.1 man-minutes to pack 100 pounds of peaches in boxes in the central and ranch sheds, respectively. Other savings arose in the supplying of materials and in the control of the supply of fruit, because most basket packing sheds did not employ a person full-time to supply materials while all of the sheds that packed boxes needed at least one person who did only that. Also, since the fruit was separated into only 2 sizes instead of the 5 packed in boxes, it was not necessary to employ workers to direct an even flow of fruit to the various packers.

More obvious than the difference in labor requirements for boxes and baskets, however, is the difference in time required to pack 100 pounds of fruit in central and ranch sheds using the standard fruit box. Central sheds required 32.6 man-minutes to pack 100 pounds of fruit compared with 41.9 man-minutes required by ranch sheds to obtain the same output. In other words, central sheds were over 20 percent more efficient than the ranch sheds in packing peaches in the standard fruit box. Savings in time were obtained in every labor category analyzed except grading.

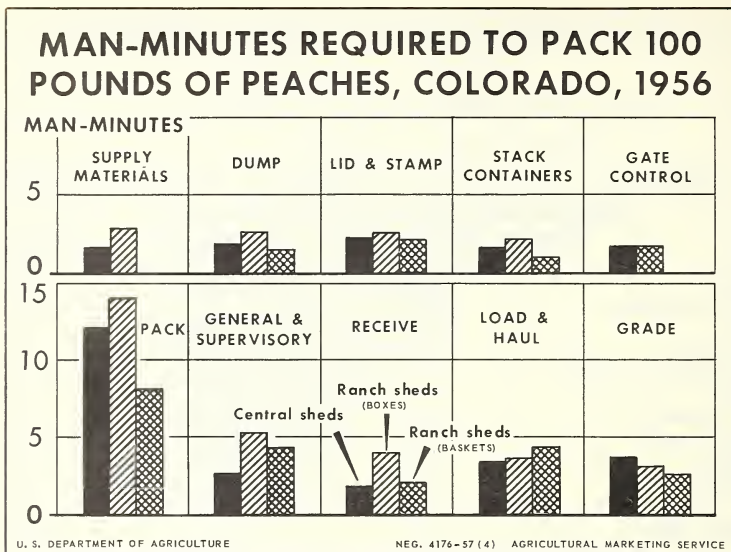


Figure 7

LABOR COSTS

Wage Rates

The labor costs in this report were obtained by multiplying the total hours worked in each labor category by the hourly wage or piece rate paid for doing that particular job. Costs per packed container were obtained by dividing this gross labor cost by the number of packed containers produced during the period of observation.

The wage rates used were those quoted by the shed managers, except in the case of supervisory help. Almost without exception, the wage rate for packing shed labor was \$1.00 per hour, but in some cases managers indicated a \$0.10 per hour bonus would be paid at the end of the season. Bonuses were disregarded in these data, so actual out-of-pocket labor costs may have been slightly higher than indicated in the following section. In both the central sheds and the ranch sheds that packed the standard fruit box, packers were paid 5.0 or 5.5 cents per box, but all packers who worked through the entire season probably were paid 5.5 cents per box. Bushel packers were usually paid on an hourly basis--\$1.00 per hour, the same as other shed labor--but some of the larger ranch sheds paid 8.0 cents per basket. In these sheds,

however, the packer both faced and filled the basket. To make the supervisory data comparable, shed foremen and owners were assigned a wage rate of \$2.50 per hour, with consideration being given to the amount of time owners actually spent in the packing shed. Packing crew supervisors and wives who performed the same work were assigned a wage rate of \$1.25 per hour.

Labor Costs Per Unit of Output

The total cost of labor to pack a box of peaches in the central sheds averaged 12.2 cents, while the ranch packing sheds using that container had an average cost of 15.5 cents per box. The range in costs in the central sheds was from 10.8 cents to 14.6 cents, while costs in the ranch sheds ranged from 9.9 to 17.0 cents per box. The total labor cost to pack a basket of peaches in 6 ranch sheds ranged from 19.1 to 27.6 cents and averaged 24.4 cents per packed container. The components of these costs are shown in table 3. More detailed data are in appendix tables 12 to 14.

Table 3.--Average total labor costs per container in packing peaches for fresh market, Mesa County, Colo., 1956

Operation	Boxes		Baskets
	Central sheds	Ranch sheds	Ranch sheds
	Cents	Cents	Cents
Dump	.57	.70	1.24
Grade	1.12	1.03	2.11
Supply materials	.47	.50	--
Pack	5.50	5.38	6.72
Gate control	.50	.50	--
Lid, stamp, tally	.70	.82	2.15
Receive	.55	1.26	1.93
Stack boxes	.49	.67	.86
Load and haul	1.18	2.15	4.78
General	.61	.80	1.49
Supervisory	.56	1.66	3.09
Total	12.25	15.47	24.37

At the wage rates paid in 1956, the average cost of dumping peaches onto the packing line was almost 0.6 cents per box in the central sheds and 0.7 cents in the ranch sheds packing the standard fruit box. The ranges were 0.2 to 0.9 and 0.3 to 1.1 cents respectively. The ranch sheds which packed the bushel tub basket had an average dumping cost of 1.2 cents per packed basket, the range being from 0.7 to 1.9 cents per bushel.

Grading costs in the central sheds ranged from 0.7 to 1.7 cents and averaged 1.1 cents per packed box of peaches. The average grading cost in ranch sheds was 1.0 cents and ranged from 0.3 to 1.7 cents per box. Grading

costs per packed bushel basket ranged from 1.4 to 2.8 cents and averaged 2.1 cents in the 6 sheds that packed that container.

The piece rate paid by the ranch sheds for packing peaches averaged 5.4 cents, while all of the central sheds quoted a rate of 5.5 cents per box. However, because it was generally considered more desirable to work in the central sheds because of more pleasant working conditions, convenience in getting to work, etc., some of the ranch operators who reported a rate of 5.0 cents per box actually may have paid more, or given some other inducement to hold packers, so that the average rate paid by ranch sheds may have been more than 5.5 cents per box.

Packers who packed the bushel tub basket were paid either by the hour or for the number of bushels packed. In these computations, the method of payment was disregarded, and the 2 operations of packing a basket, i.e., facing the top layer and filling the remainder of the basket, were combined in table 3. The total average labor cost per packed bushel basket was 6.7 cents, the range being from 4.4 to 8.2 cents among the 6 sheds.

The cost of controlling the flow of fruit to the packers in both the central and ranch sheds averaged 0.5 cents per box. The range in the central sheds was 0.4 to 0.7 cents while in the ranch sheds the cost of this particular labor component ranged from 0.3 to 1.0 cents per packed box. As pointed out in a previous section, control of the flow of fruit was not a full-time job in those ranch sheds where bushel baskets were packed.

Costs of lidding, labeling, and stamping the packed containers of fruit ranged from 0.5 to 1.1 cents in the central sheds and averaged 0.7 cents per packed box. The cost of this labor category in the ranch sheds ranged from 0.4 to 2.1 cents and averaged 0.8 cents per box. The cost of lidding a bushel basket and stamping the size and grade of the contents averaged 2.1 cents, the range being 1.1 to 5.3 cents per packed basket.

Receiving the fruit at the packing shed cost an average of 0.5 cents per box in the central sheds and 1.3 cents in the ranch sheds. The ranges were 0.3 to 1.0 and 0.2 to 2.4 cents per box, respectively. Receiving costs per packed bushel basket averaged 1.9 cents, the range being 1.3 to 2.6 cents per unit of output.

Stacking packed and empty containers in the central sheds cost an average of 0.5 cents and ranged from 0.2 to 0.8 cents per box. Labor costs for this job in the ranch sheds averaged 0.7 cents and ranged from 0.3 to 2.0 cents per packed box. The labor cost of stacking baskets averaged 0.9 cents, the range being from 0.6 cents to 1.1 cents per packed bushel basket.

The loading and hauling operation was one of the major elements of labor cost in peach packing sheds. In the central sheds the cost of these jobs ranged from 0.9 to 1.5 cents and averaged 1.2 cents per packed box. The range in these costs in ranch sheds was from 0.7 to 3.2 cents, with the average cost being 2.2 cents per packed box. There was a wide range in loading and

hauling costs for bushel baskets, the lowest being 1.7 cents and the highest 8.3 cents per basket. The average labor cost was 4.8 cents per packed basket. The averages computed in this study are very close to the rates charged by custom haulers in the area. The usual rates for custom hauling in Mesa County were 2.0 cents per box and 5.0 cents per bushel basket.

The cost of general labor in the central sheds ranged from 0.3 to 0.9 cents and averaged 0.6 cents per packed box. In the ranch sheds which packed the standard fruit box, charges for general labor ranged from 0.5 to 1.1 cents and averaged 0.8 cents per packed container. General labor costs per bushel basket averaged 1.5 cents, the range being from 0.8 to 2.4 per packed basket.

The cost of supervisory help in the central sheds was surprisingly low even under the assumed wage rate which is probably higher than the going rates for the valley (fig. 8). At \$2.50 per hour, the labor cost for supervisory help in the central sheds averaged 0.6 cents and ranged from 0.3 to 1.0 cents per packed box. Charges for supervisory help in ranch sheds averaged 1.7 cents per box and 3.1 cents per packed basket. The ranges were 0.4 to 3.2 and 0.8 to 6.9 cents for boxes and baskets respectively.

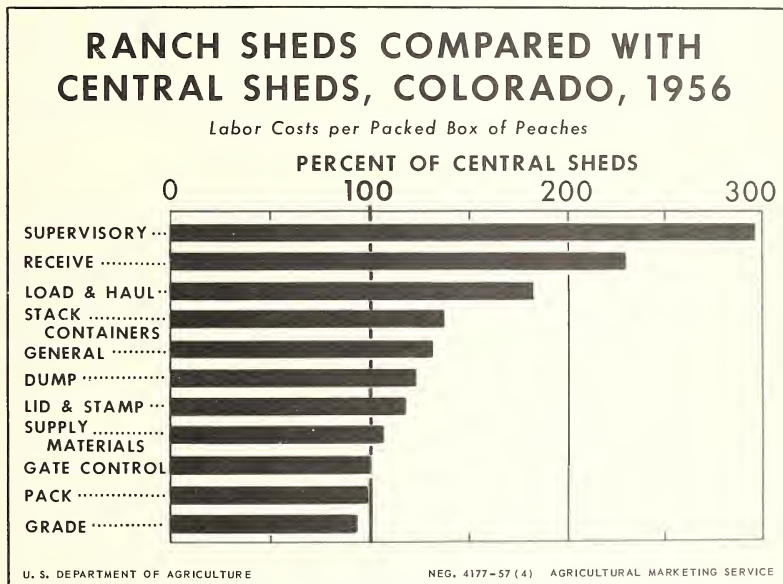


Figure 8

Labor Costs Per 100 Pounds of Fruit

Labor costs per unit of output were converted to costs per 100 pounds of fruit in order to better illustrate the differences in labor costs between the wooden box and the bushel tub basket. These comparisons are summarized in table 4.

Table 4.--Average labor costs per 100 pounds of peaches in boxes and bushel baskets, Mesa County, Colo., 1956

Operation	Box		Basket
	Central sheds	Ranch sheds	Ranch sheds
	Cents	Cents	Cents
Dump	3.17	3.89	2.58
Grade	6.22	5.72	4.40
Supply materials	2.61	2.78	--
Pack	30.56	29.89	14.00
Gate control	2.78	2.78	--
Lid, stamp, tally	3.89	4.56	4.48
Receive	3.06	7.00	4.02
Stack boxes	2.72	3.72	1.79
Load and haul	6.56	11.94	9.96
General	3.39	4.44	3.10
Supervisory	3.11	9.22	6.44
Total	68.07	85.94	50.77

In a previous section it was indicated that less time was required to pack 100 pounds of fruit in baskets than in the standard fruit boxes. The differences in time are reflected in the differences in costs shown in table 4. The largest cost savings are in the packing category. The average cost of packing 100 pounds of peaches in bushel tub baskets was approximately 14 cents compared with approximately 30 cents in the sheds that packed the wooden box (fig. 9). Additional savings were also possible in the grading and sizing category because the fruit was not separated into as many sizes for packing into baskets as in boxes (fig. 10).

The load and haul costs in central sheds were much less per 100 pounds of fruit than in any of the ranch sheds although the central sheds maintained large crews for this function. Part of this difference arises from the fact that the central sheds did little hauling except to carry away the cull fruit to the sanitary fills. Most of the charges in this category for central sheds were for loading packed fruit onto freight cars and trailers, and because of the large volume of fruit handled the unit costs were comparatively low. On the other hand, ranch sheds would have substantial hauling costs even if they did not pack their own fruit, because of their distance from the shipping facilities.

RANCH SHEDS COMPARED WITH CENTRAL SHEDS, COLORADO, 1956

Average Direct Labor Costs per 100 Pounds of Peaches

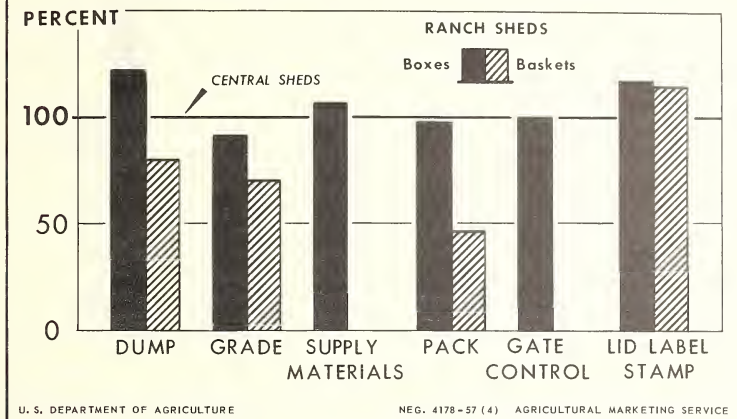


Figure 9

OVERHEAD AND MATERIALS COSTS

The overhead expenses contained in this report were obtained through personal interviews with packing shed owners and managers at the end of the regular packing season. Whenever possible, accounting data were used. However, most of the ranch packing sheds did not have accounting records and in these cases the estimates of the owners were used.

Because of the differences in record keeping, the overhead data may not be strictly comparable between ranch and central sheds. The values of buildings and equipment owned by the central sheds are the book values as taken from the firm's records. These values for the ranch sheds are the owners' estimates of value, and may represent a market or replacement price. In both the central and ranch shed categories, buildings were depreciated on a 20-year basis while equipment was depreciated over 10 years.

Actual bills were used for both central and ranch sheds to determine the unit costs for insurance, taxes, power, and telephone service. Estimate of cost of repairs was made from the annual costs over a 5-year period so that unusual charges, such as new roofs, etc., which occurred during the 1956 season would not make this item abnormal. Assessments for the administrative

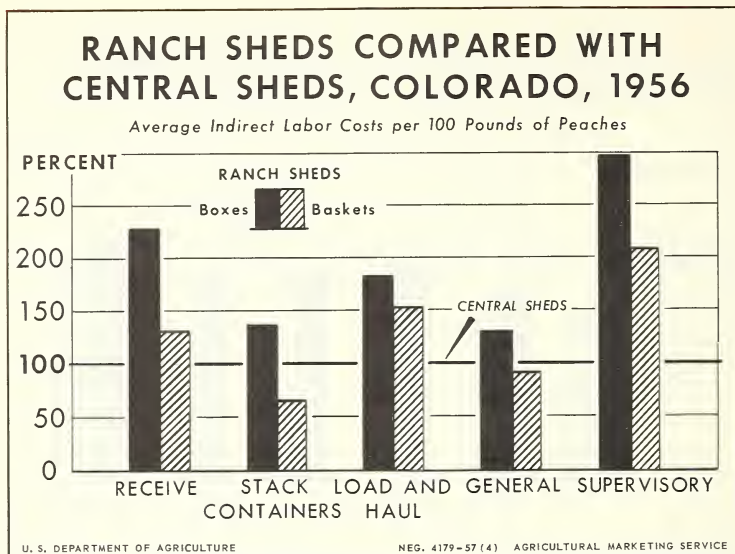


Figure 10

maintenance and functioning of the Board of Control were charged to all packers at the rates specified in the Marketing Order, i.e., 4.0 cents per bushel and 1.6 cents per box. Miscellaneous expenses for the ranch sheds are higher than those for the central sheds because they include costs of maintaining equipment for feeding and housing packing shed labor during the packing season. Miscellaneous overhead expenses in the central sheds usually consisted of office supplies and related items.

Total overhead costs were converted to a unit basis by determining the percentage of the time the packing shed facilities were used for peaches. In most of the ranch sheds, packing facilities were used only for peaches, but most of the central sheds and some of the ranch sheds also packed pears and cherries. The percentage of the overhead costs that could be charged to peaches was divided by the season total packout, to arrive at a per-unit charge.

Materials costs were determined for each of 5 central packing sheds, and these costs were used for each shed as they were computed. However, since the central sheds were the major source of packing materials in the valley, all of the ranch sheds quoted similar prices for boxes and baskets. Because the variation in prices was small, in this analysis all ranch sheds were charged 31 cents apiece for boxes and 56 cents each for baskets. The box

charge includes the cost of the box and wrappers plus an allocation of the charge for cleats to all boxes, though these were used only on the boxes of size 40 and 50 peaches. The total cost of the basket includes the basket, lid, liner, pads, and ring or fringe.

Overhead Costs Per Unit

Overhead costs in the central sheds ranged from 4.9 to 7.9 cents and averaged 6.4 cents per box. The range in overhead costs in ranch sheds was quite wide, indicating the wide variation in the packing facilities used. These expenses ranged from 4.6 to 15.6 cents and averaged 10.0 cents per box. Overhead costs for those sheds which packed the bushel basket ranged from 10.2 to 30.4 cents, averaging 18.4 cents per packed bushel basket. Components of these costs are shown in table 5, appendix tables 15 to 17.

Table 5.--Average overhead and materials costs per packed container of peaches, Mesa County, Colo., 1956

Item	Box		Basket
	Central sheds	Ranch sheds	Ranch sheds
	Cents	Cents	Cents
Depreciation:			
Building	1.65	2.01	3.71
Equipment	1.10	2.02	3.31
Insurance	.60	1.07	1.74
Taxes	.67	.96	2.54
Power	.18	.19	.37
Repairs	.44	.79	1.18
Telephone & telegraph	.09	.19	.26
Assessments	1.60	1.60	4.00
Miscellaneous	.08	1.12	1.31
Total overhead	6.41	9.95	18.42
Materials costs	25.95	31.00	56.00
Total fixed costs	32.36	40.95	74.42

Overhead Costs Per 100 Pounds of Fruit

When overhead costs are converted to cents per 100 pounds, costs in the central sheds and in the ranch sheds packing baskets were similar (table 6). Overhead costs in the ranch sheds which packed the standard fruit box were much higher per 100 pounds of fruit than in either the central sheds or ranch sheds which packed the bushel basket. The greatest differences occur in charges for depreciation of buildings and equipment. As a general rule, the ranch sheds which packed boxes had much higher investments in equipment than the ranch sheds that packed the bushel tub basket. It is possible that some

of these ranch sheds are over-capitalized for the volume of fruit they had to pack in 1956.

Table 6.--Overhead costs per 100 pounds of packed peaches, Mesa County, Colo., 1956

Item	Box		Basket
	Central sheds	Ranch sheds	Ranch sheds
	Cents	Cents	Cents
Depreciation:			
Building	9.17	11.17	7.73
Equipment	6.11	11.22	6.90
Insurance	3.33	5.94	3.62
Taxes	3.72	5.33	5.29
Power	1.00	1.06	.77
Repairs	2.44	4.39	2.46
Telephone & telegraph	.50	1.06	.54
Assessments	8.89	8.89	8.33
Miscellaneous	.44	6.22	2.73
Total	35.60	55.28	38.37

TOTAL COSTS

Average total costs of packing peaches for fresh market during the 1956 season in Colorado were almost 45 cents per box in central sheds and slightly over 56 cents in ranch sheds packing the standard fruit box. Average total costs to pack a bushel tub basket were almost 99 cents (table 7). Central sheds had average total costs of \$2.48 per 100 pounds of peaches packed in the standard fruit box. Ranch sheds using this container had average total costs of \$3.13, while total costs in ranch sheds that packed the bushel tub basket averaged \$2.06 per 100 pounds of peaches packed (fig. 11).

Table 7.--Average total costs in packing peaches for fresh market, Mesa County, Colo., 1956

Item	Costs per packed container			Costs per 100 lbs. of fruit		
	Boxes	Baskets	Baskets	Boxes	Baskets	Baskets
	Central sheds	Ranch sheds	Ranch sheds	Central sheds	Ranch sheds	Ranch sheds
	Cents	Cents	Cents	Cents	Cents	Cents
Labor costs	12.25	15.47	24.37	68.07	85.94	50.77
Overhead costs	6.41	9.95	18.42	35.60	55.28	38.37
Materials costs	25.95	31.00	56.00	144.17	172.22	116.67
Total costs	44.61	56.42	98.79	247.84	313.44	205.81

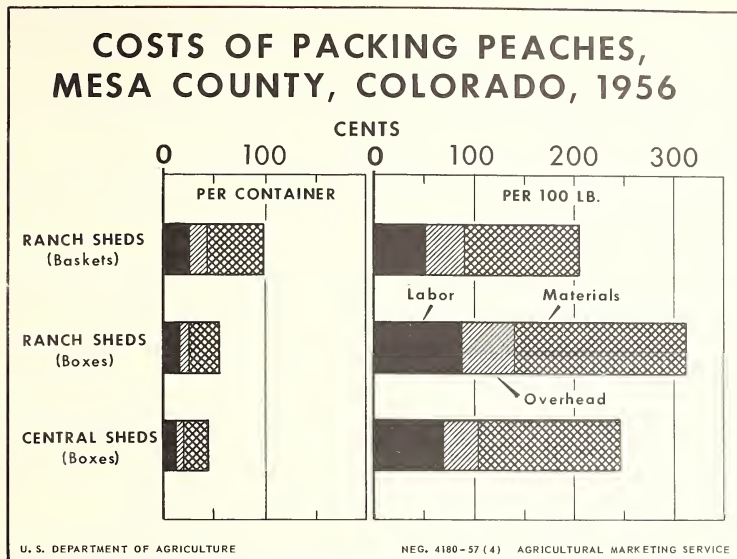


Figure 11

Packing materials were the largest single cost item in packing peaches for fresh market. On a container basis, the cost of packing materials averaged 56 percent of total packing costs regardless of the type of container used. Labor comprised 27 percent of the total costs while overhead and fixed costs accounted for approximately 17 percent of the total. Overhead costs were probably a greater percentage of total packing costs in 1956 than in most years because the crop was smaller than usual, resulting in a higher cost per unit of output.

MARKETING ORDERS AND PRICES

Mesa County peaches are marketed under a Federal Marketing Agreement which specifies the sizes and grades of peaches which can be shipped out of the State. A State Marketing Agreement regulates the sizes and grades of peaches which may be shipped within the State. The rules and regulations of the State Orders are administered by the Mesa County Peach Board of Control, through authority from the Colorado State Commissioner of Agriculture. The Board recommends the grades and sizes of peaches to be shipped, and publishes the prices at which peaches are offered for sale.

During the 1956 season, only U. S. No. 1 or better peaches 2 1/8 inches or larger were permitted to be shipped, with the exception of Gleason and early Elberta peaches for which the minimum size was 2 inches. Some exemptions were granted to distressed producers who had poor crops so that some Standard Elberta peaches of less than 2 1/8 inches were also shipped out. All peaches packed for the fresh market were inspected by Federal-State inspectors for conformance with grade and size standards. Most of these inspections were performed at the central packing and shipping docks, but weighing and inspection stations were also set up along highways leading out of the area to check bulk and packed truck loads which would have been missed otherwise.

Section IV of the Colorado State Marketing Order provides for the filing and posting of prices at which Mesa County peaches will be offered for sale. Price filing regulations are issued by the Colorado Commissioner of Agriculture and peach handlers are notified by the Peach Board of Control when these regulations are in effect. Under these regulations, each shipper of peaches must file with the Board of Control a complete schedule of prices at which he will quote or sell peaches during the time the regulations are in effect. These schedules of prices include selling prices, discounts, rebates, and all other terms and conditions of sale for each variety, grade, size and type of pack of peaches sold. A handler may revise his prices under certain stipulations and with the permission of the Board of Control.

In actual practice, the price-filing period is one in which the peach handlers arrive at prices which they believe will move their peaches and yield a fair return to the growers, taking into consideration the local supplies as well as supplies and prices in competing areas. The prices filed by the handlers become the selling price for the area. Records of sales are filed with the Board of Control and published every morning during the time the regulation is in effect.

In 1956, price posting became effective on August 16 and was in effect until August 28. The posted price f. o. b. Palisade, Colo., was \$1.25 per standard fruit box for sizes 40, 50, 60, and 70. Size 75 peaches sold for \$1.15 per box. Size 2 1/8 inch to 2 1/4 inch peaches in bushel tub baskets were priced at \$2.50 each, while 2 1/4 inch and up peaches were priced at \$2.75 per basket. With only 2 exceptions, these prices held from August 16 to August 28. Prices on bulk peaches ranged from \$1.00 to \$2.25 per bushel, but most were sold for \$2.00 at the beginning of the season, dropping to \$1.75 per bushel toward the end.

PRICES AND ESTIMATED GROWER RETURNS

Estimated grower returns for U. S. No. 1 peaches in boxes and baskets are shown in table 8. Actual grower returns might be somewhat lower than those shown because the basis for the analysis is the posted prices. Gross returns to growers probably were lower than the posted prices because of quantity discounts, rebates, and other sales allowances. Conversely, cash

returns to the grower may have been higher than those used in this analysis because charges for fixed cost items in overhead expenses are not current cash expenditures.

Table 8.--Estimated average grower returns for ranch-packed fresh peaches, Mesa County, Colo., 1956

Item	Per container		Per 100 pounds	
	Boxes	Baskets	Boxes	Baskets
	Cents	Cents	Cents	Cents
Posted price	1.25	2.75	6.94	5.73
Less selling charges	.12	.25	.67	.52
	1.13	2.50	6.27	5.21
Less packing costs	.56	.99	3.13	2.06
	.57	1.51	3.14	3.15
Less harvesting costs	.19	.28	1.06	.58
Grower returns	.38	1.23	2.08	2.57

Growers who packed their peaches in the standard box realized approximately 38 cents for each box of U. S. No. 1, 2 1/4 inches and up, which they marketed, while growers who packed in the bushel tub basket received approximately \$1.23 (table 8). Out of these returns per container of packed fruit, growers had to pay for the costs of production which, among other things, included irrigation, fertilizer, spray materials, hired labor, other overhead expenses, and a living wage for the owner of the land. Growers who packed the bushel basket received more money per pound of peaches than those who packed the wooden box. They received over 3 times as much return per unit of output for slightly over 2 1/2 times as much fruit.

Although it has been indicated that packing costs are less and dollar returns are probably higher for peaches packed in bushel baskets, the use of this container has been declining in Colorado as well as in other peach producing areas. In 1946, approximately equal quantities of peaches were shipped out of Mesa County in bushel baskets and in boxes. In 1956, over 58 percent of the peaches was shipped in boxes, compared with 34 percent in bushel baskets.

It is expected that the use of the bushel basket as a shipping container for peaches will continue to decline. The basket is rapidly losing favor with buyers and retailers, and peaches packed in this container require a greater selling effort. Conversely, the standard box (and the improvements on it which are being made) is an acceptable consumer package and it enables Colorado to compete more favorably with other producing areas which are marketing their peaches at the same time and which are located closer to the larger markets.

To illustrate the relative undesirability of the bushel basket to the trade, on August 23, the day after the peak packout for the season, there was an equivalent of 193 carloads of peaches packed in bushel baskets remaining unsold, compared with an equivalent of only 18 carloads of boxed peaches. On August 22, there were 147.7 carload equivalents of basket peaches packed and loaded compared with 143.1 carload equivalents of boxed peaches. ^{2/}

CONCLUSIONS

The data presented in this report indicate that it is more efficient and less expensive to pack peaches in the large central packing sheds than in the smaller ranch packing sheds. Economies can be obtained through the more efficient use of labor, plant, and equipment. Additional savings accrue through the purchasing of packing materials in large quantities.

There are several deterrents to the consolidation of peach packing into a few large central sheds. At the present time, the existing central packing sheds are not equipped to handle the large volume of fruit in the comparatively short period of the Standard Elberta harvest. The 7 central sheds included in this study had a total packout of approximately 600,000 boxes in 1956. Although they were working at less than full capacity, it is doubtful that they could pack more than one-third of the area production in years of normal crops.

Some growers also believe they can pack more cheaply than the central sheds because they use family labor, and in many cases the actual out-of-pocket labor costs were probably lower than those shown in this report. In addition, approximately 5,000 people come into the area each year to help with the peach harvest. Many of these are families and it often happens that the grower can hire the man as a picker and employ his wife and older children in the packing shed. For this reason, many of the growers maintain board and room facilities during the packing season.

An additional deterrent to consolidation of packing facilities or the improvement of existing facilities is the relatively short time the packing sheds are used during the year. Although some of the central sheds are also used for the storage of production and harvesting supplies and equipment, they are maintained primarily for the peach packing operations. If returns to capital are not sufficiently high, entrepreneurs are reluctant to make extensive capital outlays on equipment which is used only 2 or 3 weeks of the year. The data in this analysis indicate that peaches can be packed in the central sheds more cheaply than in the ranch sheds, but the returns per dollar of investment in these sheds were not determined. Whether they are high enough to justify additional expenditures for more modern plants and equipment is a decision which must be made by the management of the central sheds.

^{2/} "1956 Co-ordinator's report, Mesa County." Colo. Dept. Agr., Sept. 1956.

However, faced with increasing consumer demand for more mature fruit and increased competition from other producing areas for the limited fresh peach market, Mesa County growers must find more efficient, less costly, ways to pack and market more mature peaches. Some consolidation of packing operations appears to be the most expeditious way to obtain increased efficiency in the short run.

The long-run aspects of the problem include an analysis of benefits to be derived by using different types of equipment and containers, the feasibility of increasing the size and capacity of the central sheds, the effect on costs of lengthening the packing season through the planting of other fruits or other varieties of peaches, and the impact of market demand for precooled, more mature, peaches on the organization of the peach industry in Mesa County. These and other aspects of the problem were outside the scope of this study and were not considered in this report.

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Table 9.--Labor requirements per standard fruit box in packing peaches for fresh market, 7 Colorado central packing sheds, August 1956

Operation	Packing shed								Average
	T	U	V	W	X	Y	Z		
	Man- minutes	Man- minutes	Man- minutes	Man- minutes	Man- minutes	Man- minutes	Man- minutes	Man- minutes	Man- minutes
<u>Direct</u>									
Dump	0.27	0.25	0.12	0.37	0.36	0.52	0.40	0.33	
Grade	.81	.50	.74	.65	.54	1.03	.40	.67	
Supply ma- terials	.17	.25	.31	.26	.14	.26	.55	.28	
Pack	2.24	2.26	1.89	2.12	2.23	2.08	2.49	2.19	
Gate con- trol	.41	.25	.25	.26	.27	.26	.40	.30	
Lid, stamp, & tally	.35	.24	.30	.32	.45	.65	.48	.42	
<u>Indirect</u>									
Receive	.41	.25	.25	.19	.17	.57	.32	.31	
Stack boxes	.34	.38	.40	.13	.32	.13	.24	.28	
Load out	.50	.37	.63	.58	.74	.90	.55	.61	
General	.27	.44	.37	.13	.27	.45	.16	.30	
Supervi- sory	.20	.12	.20	.06	.18	.39	.11	.18	
Total	5.97	5.31	5.46	5.07	5.67	7.24	6.10	5.85	

Table 10.--Labor requirements per standard fruit box in packing peaches for fresh market, 12 Colorado ranch packing sheds, August 1956

Operation	Packing shed														Average
	H	I	J	K	L	M	N	O	P	Q	R	S	S		
Dump	Man. min. 0.30	0.27	Man. min. 0.61	0.32	Man. min. 0.65	0.37	Man. min. 0.18	0.62	Man. min. 0.55	0.46	Man. min. 0.17	0.27	Man. min. 0.19	0.49	
Grade	.81	.27	.61	.36	.60	.99	.55	.62	.54	.74	.17	.40	.56		
Supply materials	---	.50	.61	.32	.60	.66	.37	1.15	---	.37	.34	.41	.53		
Pack	2.01	3.04	2.44	1.62	3.57	2.98	2.21	3.45	2.97	1.86	2.22	2.00	2.53		
Gate control	.20	---	---	---	.60	.33	.18	---	---	.37	.17	.27	.30		
Lid and stamp	.40	.25	1.21	.34	.60	.33	.36	.58	.50	.37	.34	.28	.46		
Receive	1.35	---	---	.41	.60	---	.94	---	---	---	.91	.14	.72		
Stack boxes	---	.25	---	.32	.62	.33	.18	.57	.49	.37	.17	.43	.37		
Load and haul	.30	1.05	.61	.66	.62	.74	---	---	.99	.56	.16	.71	.64		
General	.40	.55	.69	.32	---	---	---	---	---	.46	---	---	.48		
Supervisory	.10	.30	.76	.36	.68	.66	.25	1.15	.68	.19	.17	.28	.46		
Total	5.87	6.48	7.54	5.03	9.14	7.39	5.22	8.14	6.72	5.75	4.82	5.19	7.47		

Table 11.--Labor requirements per bushel tub basket in packing peaches for fresh market, 6 Colorado ranch packing sheds, August 1956

Operation	Packing shed							Average
	A	C	D	E	F	G		
	Man- minutes	Man- minutes	Man- minutes	Man- minutes	Man- minutes	Man- minutes	Man- minutes	
Dump.....	0.72	0.49	0.88	0.42	1.12	0.64	0.71	
Grade.....	1.44	.97	1.29	.85	1.12	1.69	1.23	
Face.....	1.44	1.95	1.29	2.12	2.24	2.38	1.90	
Fill.....	2.52	1.95	1.29	2.12	2.24	1.90	2.00	
Lid & stamp..	.72	1.46	.66	.85	1.12	1.81	1.02	
Stack packed :								
baskets....	---	---	.63	.38	---	---	.50	
Load & haul..	1.53	.83	3.75	2.12	1.88	2.29	2.07	
Receive.....	1.44	.67	.88	---	.76	---	.94	
General.....	.72	1.46	---	.85	.48	1.64	1.03	
Supervisory..	.72	.19	2.05	.93	1.60	.78	1.04	
Total....	11.25	9.97	12.72	10.64	12.56	13.13	14.21	

Table 12.--Labor costs per standard fruit box in packing peaches for fresh market, 7 Colorado central packing sheds, August 1956

Operation	Packing shed							Average
	T	U	V	W	X	Y	Z	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	
Dump.....	0.48	0.46	0.21	0.63	0.66	0.90	0.66	0.57
Grade.....	1.36	.91	1.23	1.08	.89	1.72	.66	1.12
Supply ma- terials....	.29	.46	.51	.38	.24	.43	.95	.47
Pack.....	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
Gate control.	.68	.46	.41	.43	.45	.43	.66	.50
Lid, stamp, & tally....	.62	.47	.57	.57	.78	1.10	.81	.70
Receive.....	.70	.44	.41	.40	.33	.97	.58	.55
Stack boxes..	.80	.68	.66	.22	.45	.22	.40	.49
Load & haul..	.91	1.25	1.24	1.06	1.30	1.51	1.02	1.18
General.....	.49	.80	.74	.27	.88	.77	.32	.61
Supervisory..	.60	.45	.58	.27	.56	1.01	.48	.56
Total....	12.43	11.88	12.06	10.81	12.04	14.56	12.04	12.26

Table 13.--Labor costs per standard fruit box in packing peaches for fresh market, 12 Colorado ranch packing sheds, August 1956

Operation	Packing shed																Average
	H	I	J	K	L	M	N	O	P	Q	R	S	Cents		Cents		
Dump	0.55	0.57	1.02	0.65	1.09	0.61	0.31	1.11	0.91	0.85	0.28	0.44	0.70	0.70	0.70	0.70	0.70
Grade	1.34	.57	1.02	1.49	.99	1.66	.92	1.11	.91	1.36	.28	.67	1.03	.67	.67	.67	1.03
Supply materials	.30	.59	.51	.49	.50	.39	.42	.96	---	.31	.44	.56	.50	.56	.56	.56	.50
Pack	5.50	5.50	5.00	5.50	5.00	5.50	5.50	5.00	5.00	7.00	5.00	5.00	5.38	5.00	5.00	5.00	5.38
Gate control	.37	---	---	---	.99	.55	.31	---	---	.62	.28	.40	.50	.40	.40	.40	.50
Lid and stamp	.37	.48	1.52	.71	.99	.55	.49	.96	2.09	.77	.50	.47	.82	.47	.47	.47	.82
Receive	2.44	---	---	.79	.99	---	1.57	---	---	---	1.52	.24	1.26	.24	.24	.24	1.26
Stack boxes	.37	.48	---	.49	.52	.55	.31	.96	2.04	.62	.28	.71	.67	.71	.71	.71	.67
Load and haul	2.50	3.05	3.02	1.24	3.04	3.23	.83	2.40	1.65	3.02	.65	1.19	2.15	1.19	1.19	1.19	2.15
General	.50	.91	1.14	.67	---	---	---	---	---	.77	---	---	.80	---	---	---	.80
Supervisory	.42	1.27	3.18	---	2.84	1.99	.91	2.40	2.83	.77	.71	.95	1.66	.95	.95	.95	1.66
Total	14.66	13.42	16.41	12.03	16.95	15.03	11.57	14.90	15.43	16.09	9.94	10.63	15.47	10.63	10.63	10.63	15.47

Table 14.--Labor costs per bushel tub basket in packing peaches for fresh market, 6 Colorado ranch packing sheds, August 1956

Operation	Packing shed							Average
	A	C	D	E	F	G		
	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>
Dump	1.20	1.01	1.46	0.71	1.86	1.22	1.24	
Grade	2.40	2.03	2.15	1.41	1.86	2.81	2.11	
Face	2.40	3.24	2.15	4.00	3.73	3.97	3.25	
Fill	4.19	3.24	2.15	4.00	3.73	3.49	3.47	
Lid and stamp	1.20	2.03	1.11	1.41	1.86	5.27	2.15	
Stack packed boxes	---	---	1.07	.64	---	---	.86	
Load and haul	2.55	1.74	6.25	3.53	6.27	8.34	4.78	
Receive	2.40	2.60	1.46	---	1.27	---	1.93	
General	1.20	2.43	---	1.84	1.20	.78	1.49	
Supervisory	3.29	.77	6.93	2.48	3.33	1.73	3.09	
Total	20.83	19.09	24.73	20.02	25.11	27.61	24.36	

Table 15.--Overhead and materials costs per standard fruit box in packing peaches for fresh market, 5 Colorado central packing sheds, August 1956

Operation	Packing shed					Average
	T	U	V	W	X	
	Cents	Cents	Cents	Cents	Cents	Cents
Depreciation:						
Building	1.09	0.94	2.04	1.37	2.80	1.65
Equipment	.60	.70	1.70	1.37	1.13	1.10
Insurance	1.36	.08	.87	.29	.40	.60
Taxes	.45	.48	.85	.73	.82	.67
Power	.05	.10	.43	.05	.28	.18
Repairs	.35	.87	.40	.41	.19	.44
Telephone and telegraph	.07	.04	.03	.10	.19	.09
Assessments	1.60	1.60	1.60	1.60	1.60	1.60
Miscellaneous	.02	.12	---	.07	.12	.08
Total overhead	5.59	4.93	7.92	5.99	7.53	6.41
Materials:						
Boxes	17.63	16.85	17.63	17.45	17.63	17.44
Lids	3.91	3.95	3.91	3.94	3.91	3.92
Wrappers	2.86	2.86	2.86	2.86	2.86	2.86
Nails	.53	.55	.53	.54	.53	.54
Cleats	.08	.08	.08	---	.08	.08
Labor	1.35	1.00	1.35	.50	1.35	1.11
Total materials	26.36	25.29	26.36	25.29	26.36	25.95
Total overhead and materials cost	31.95	30.22	34.28	31.28	33.89	32.36

Table 16.--Overhead and materials costs per standard fruit box in packing peaches for fresh market,
12 Colorado ranch packing sheds, August 1956

Item	Packing shed														Average
	H	I	J	K	L	M	N	O	P	Q	R	S	S		
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	
Depreciation building	4.22	1.14	1.39	2.25	1.51	2.14	0.80	5.00	1.95	2.47	0.69	0.53	2.01		
Equipment	.35	.46	2.08	1.08	3.03	2.67	1.20	3.75	2.60	4.94	1.55	.53	2.02		
Insurance	.84	.61	1.21	.47	1.40	.40	2.32	1.57	1.48	1.14	.99	.41	1.07		
Taxes	.58	.65	.83	.54	.81	.92	.20	1.50	1.17	2.37	1.15	.85	.96		
Power	.35	.28	.25	.11	.10	.15	.12	.70	.13	.05	.06	.02	.19		
Repairs	.35	.57	2.77	.45	.20	.43	.80	1.00	.13	1.23	1.38	.21	.79		
Telephone and telegraph	.21	.06	.29	.04	.02	.26	.40	.21	.07	.58	.02	.16	.19		
Assessments	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60		
Miscellaneous	1.84	1.71	2.43	.05	1.53	.38	2.00	.25	---	---	.69	.33	1.12		
Total overhead	10.34	7.08	12.85	6.59	10.20	8.95	9.44	15.58	9.13	14.38	8.13	4.64	9.95		
Average materials cost	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00		
Total overhead and materials cost	41.34	38.08	43.85	37.59	41.20	39.95	40.44	46.58	40.13	45.38	39.13	35.64	40.95		

Table 17.--Overhead and materials costs per bushel tub basket in packing peaches for fresh market, 6 Colorado packing sheds, August 1956

Item	Packing shed						Average
	A	C	D	E	F	G	
	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Depreciation:							
Building	3.71	0.53	1.19	4.51	10.32	1.99	3.71
Equipment	2.47	1.81	3.80	3.95	6.88	.93	3.31
Insurance	1.01	.96	2.23	2.44	3.52	.26	1.74
Taxes	1.24	.90	2.37	1.42	3.44	5.89	2.54
Power	.37	.30	.71	.23	.10	.53	.37
Repairs	2.47	1.20	.28	1.18	1.90	.08	1.18
Telephone and telegraph	.20	.06	.28	.56	.29	.14	.26
Assessments	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Miscellaneous	.62	.47	3.80	---	---	.37	1.31
Subtotal	16.09	10.23	18.66	18.29	30.45	14.19	18.42
Average materials cost	56.00	56.00	56.00	56.00	56.00	56.00	56.00
Total overhead and materials cost	72.09	66.23	74.66	74.29	86.45	70.19	74.42



